

**ABSTRACT OF THE DISCLOSURE**

A method and an apparatus for detecting location of a movable body in a navigation system comprising a map data detector for detecting map information of a region corresponding to location information from an external digital map storage on the basis of the location information of the movable body transmitted from sensors sensing the location and traveling information of the movable body; a memory for storing the map information detected from the map data detector; a filter for computing an optimum location of the movable body including road error included in the map information on the basis of the location and traveling information of the movable body transmitted from the sensors; and a map-matching unit for receiving the optimum location information of the movable body from the filter and correcting the optimum location information by matching the optimum location information and the map information stored in the memory. The method and apparatus can apply a constraint to the location of the movable body by computing the location of the movable body including a width of road, in comparison with a case using only direction of road as a measured value. Further, the method and apparatus increases accuracy of location determination of the movable body by performing real-time correction of the sensor information including error whenever the sensor information is inputted, using the constraint model including the map information.